

What is claimed is:

1. A process for transducing a cell with a DNA sequence, which process comprises:

(1) contacting said cell with genetic material coding for products that do not generate viral particles, wherein said genetic material consists essentially of

(a) a first genetic construct for integration into a chromosome of said cell, said first genetic transcript being free of DNA encoding adeno-associated virus rep protein and including, in a 5' to 3' direction,

(i) a first adeno-associated viral ITR,

(ii) a promoter controlling a DNA encoding a polypeptide or genetic transcript of interest,

(iii) a DNA encoding a polypeptide or genetic transcript of interest, and

(iv) a second adeno-associated viral ITR, and

(b) a second genetic construct that provides, upon expression, an adeno-associated virus rep protein in *trans* with respect to said first genetic construct,

wherein said cell is transduced with said first genetic construct and said second genetic construct upon contact of said cell with said first genetic construct and said second genetic construct and wherein said adeno-associated virus rep protein is the only adeno-associated viral protein expressed by said second genetic construct, and

(2) introducing said cell into a mammal.

2. The process of claim 1, wherein said cell was obtained from the mammal.

3. A process for transducing a cell with a DNA sequence, which process comprises:

(1) contacting said cell with genetic material coding for products that do not generate viral particles, wherein said genetic material consists essentially of

(a) a genetic construct for integration into a chromosome of said cell, said genetic transcript being free of DNA encoding adeno-associated virus rep protein and including, in a 5' to 3' direction,

(i) a first adeno-associated viral ITR,

(ii) a promoter controlling a DNA encoding a polypeptide or genetic transcript of interest,

(iii) a DNA encoding a polypeptide or genetic transcript of interest, and

(iv) a second adeno-associated viral ITR, and

(b) an adeno-associated virus rep protein provided in trans with respect to said genetic construct,

wherein said cell is transduced with said genetic construct upon contact of said cell with said genetic construct and said rep protein and wherein said rep protein is the only adeno-associated viral protein which is present as a result of said process and which contacts said cell, and

(2) introducing said cell into a mammal.

4. The process of claim 3, wherein said cell was obtained from the mammal.

5. A process for transducing a cell *in vivo* with a DNA sequence, which process comprises contacting said cell with genetic material coding for products that do not generate viral particles, wherein said genetic material consists essentially of

(a) a first genetic construct for integration into a chromosome of said cell, said first genetic transcript being free of DNA encoding adeno-associated virus rep protein and including, in a 5' to 3' direction,

(i) a first adeno-associated viral ITR,

(ii) a promoter controlling a DNA encoding a polypeptide or genetic transcript of interest,

(iii) a DNA encoding a polypeptide or genetic transcript of interest, and

(iv) a second adeno-associated viral ITR, and

(b) a second genetic construct that provides, upon expression, an adeno-associated virus rep protein *in trans* with respect to said first genetic construct,

wherein said cell is transduced with said first genetic construct and said second genetic construct upon contact of said cell with said first genetic construct and said second genetic construct and wherein said adeno-associated virus rep protein is the only adeno-associated viral protein expressed by said second genetic construct.

6. A process for transducing a cell *in vivo* with a DNA sequence, which process comprises contacting said cell with genetic material coding for products that do not generate viral particles, wherein said genetic material consists essentially of

(a) a genetic construct for integration into a chromosome of said cell, said genetic transcript being free of DNA encoding adeno-associated virus rep protein and including, in a 5' to 3' direction,

(i) a first adeno-associated viral ITR,

(ii) a promoter controlling a DNA encoding a polypeptide or genetic transcript of interest,

(iii) a DNA encoding a polypeptide or genetic transcript of interest, and

(iv) a second adeno-associated viral ITR, and

(b) an adeno-associated virus rep protein provided *in trans* with respect to said genetic construct,

wherein said cell is transduced with said genetic construct upon contact of said cell with said genetic construct and said rep protein and wherein said rep protein is the only adeno-associated viral protein which is present as a result of said process and which contacts said cell.